



Compliance Management

White Paper

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Contents

This white paper introduces the eControl software functions for achieving and sustaining compliance in relation to a standard.

For all persons involved, the achievement and sustaining of an optimum degree of compliance is a challenge which can be speeded up and simplified in many ways by the eControl software tool.

The concept presented here can be applied not only to the EASA Standard, the ICAO counterpart, but also to any other regulations.

This white paper presents the implementation of a systematic management concept that integrates all available internal and external resources. A further main focus on the ability to respond to future changes in compliance requirements and to maintain the high degree of compliance.

This white paper explains integrated compliance management using eControl in 15 steps:

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| 2 Identify stakeholders | 10 Monitor compliance status |
| 3 Bundle data | 11 Generate compliance statistics |
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We are particularly grateful to Mr Martin Bochert, whose supporting expertise we were able to draw on in the course of production of his master's thesis *"EASA Compliance Monitoring"*.

1

Provide standard and requirements

Every standard, including all its requirements, must be structured via the freely definable system structure of the eControl process and system tree.

„ICAO Annex 14“

and

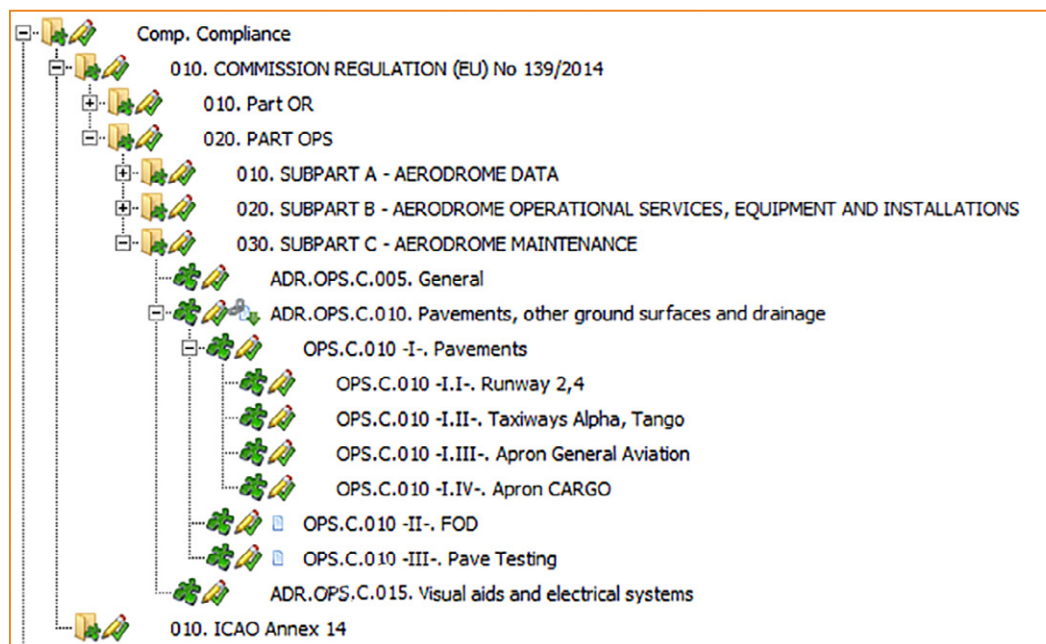
“COMMISSION REGULATION (EU) No. 139/2014 dated 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No. 216/2008 of the European Parliament and the Council”

with the associated

„EASA AMC/GM“

are available pre-defined for uploading.

The structure can be further differentiated or changed as necessary if required for organisational or technical reasons¹.



In the example shown here, “ADR.OPS.C.010 - Pavements, other ground surfaces and drainage” was further sub-divided into “Pavement”, “FOD” and “Pave testing”, whereby “Pavement” was divided again into “Runway 2,4”, “Taxiways Alpha, Tango”, “Apron General Aviation” and “Apron CARGO”. The number and depth of the sub-divisions is not limited and can be undertaken with as much detail as desired.

¹Here it could for example also be a case of appended contracts, the individual duration of which it is intended to administer.

2

Identify stakeholder

Data must be bundled for each stakeholder and the access rights to this data must be suitably structured.

Possible groups of people for the sample project are listed below:

Group of people	In respect of
Organisational unit responsible for compliance management	e.g. <ul style="list-style-type: none"> • Compliance management department • Legal department • Person responsible for safety management
GAP analysis and task planning	e.g. Consulting partners
Responsibility for implementation of individual tasks per requirement	e.g. staff in specialist departments
Interested stakeholders	e.g. public authorities

Group of people	In respect of
Overall responsibility	SMS
GAP analysis	Consulting partners
Responsibility for implementation of individual tasks per requirement	e.g. 12 members of staff from 7 specialist departments
Civil Aviation Authority	Authority with no online access
Management and assistants	Management with online access

3 Bundle data

In order to be able to inform the groups and stakeholders identified in the second step in a targeted, systematic and reliable manner, the data or information should be sub-divided according to functional criteria.

So-called compliance categories are available for this sub-division. These compliance categories are essential for authorisation control, as, in order to simplify administration, user rights are not awarded for individual data fields, but rather for compliance categories.

In the example shown here, the following categories were demarcated:

- **Regulations:**
Information for interpretation of the standard, for certification and assessment of compliance
- **Findings:**
Recording and monitoring the elimination of discrepancies
- **Authority:**
Communication with and processing data from the Civil Aviation Authority
- **Internal:**
Saving internal data in the respective compliance management context

For the stakeholders identified in the previous step, the following classification concept is suggested as an example:

Compliance category	Group of people	Authorisation
EASA 2014 Regulations	SMS	READ & WRITE
	Consulting partners	READ & WRITE
	Civil Aviation Authority	READ
	Management	READ

EASA 2014 Findings	SMS	READ & WRITE
	Consulting partners	READ & WRITE
	12 members of staff from 7 specialist departments	READ & WRITE
	Civil Aviation Authority	READ
	Management	READ

Compliance category	Group of people	Authorisation
EASA 2014 Authority	SMS	READ & WRITE
	Consulting partners	READ
	12 members of staff from 7 specialist departments	READ
	Civil Aviation Authority	READ
	Management	READ

EASA 2014 Internal	SMS	READ & WRITE
	Consulting partners	READ
	12 members of staff from 7 specialist departments	READ & WRITE
	Civil Aviation Authority	READ
	Management	READ

The authorisation of groups of people – e.g. “12 members of staff from 7 specialist departments” – is not allocated across the board for all requirements, but refers to individual, several or even all requirements, according to needs (compare with Step 5).

4 Demarcate data fields

The question of which data it makes sense to collect in the course of compliance management is dependent on the volume of tasks to be expected, on organisational requirements and on individual agreements with the respective Civil Aviation Authority.

Various data fields are suggested below for the demarcated compliance categories in Step 3. These data fields can also be freely modelled². The data fields presented are only an example and can be exceptionally added to or changed at any time.

The data fields are described across the system as process attributes.

Name of field	Description
EASA 2014 Regulations	
Key elements	Text 4000 characters
Applicable	Value range ³ YES,NO
Reason (if not applicable)	Text 4000 characters
Evidence	Text 4000 characters
Evidence assessment	Text 4000 characters
Evidence comments	Text 4000 characters
Validation organization	Value range ³ Arconda Airport, Consulting Partner, unknown
Validation employee	Value range ³ Sorge,Konstantin - Boeing, Bodo - Doe, John
Validation schedule date	Text 4000 characters
Validation status	Value range ³ not started, analysis, coordination with authority, corrective action, examination by authority, finished
Priority	Value range ³ critical, blocker, major, minor, trivial
Cost of compliance	Text 4000 characters
Cost of non-compliance	Text 4000 characters

²For the compliance categories and data fields presented here there exists - as is the case for the compliance standards and the requirements - the possibility of automatically generating them by running a database script. For value ranges and value range data, a standardised import / export functionality is available.

³Value ranges and value range data can be freely defined by system administrators. Value ranges serve to determine which options are available for selection in a drop-down combo box.

Name of field	Description
EASA 2014 Findings	
Finding description	Text 4000 characters
Finding comments	Text 4000 characters
Finding target period	Value range ³ 14Q3,14Q4,15Q1,15Q2,15Q3,15Q4,16Q1,16Q2,16Q3,16Q4
Finding organization	Value range ³ Arconda Airport, XYZ Consulting, unknown
Finding employee	Value range ³ Sorge,Konstantin - Boeing, Bodo - Doe, John
Evidence comments	Text 4000 characters
Validation organization	Value range ³ Arconda Airport, Consulting Partner, unknown
Validation employee	Value range ³ Sorge,Konstantin - Boeing, Bodo - Doe, John
Validation schedule date	Text 4000 characters
Validation status	Value range ³ not started, analysis, coordination with authority, corrective action, examination by authority, finished
Priority	Value range ³ critical, blocker, major, minor, trivial
Cost of compliance	Text 4000 characters
Cost of non-compliance	Text 4000 characters
EASA 2014 Authority	
Authority notification date	Text 4000 characters
Authority processing by	Text 4000 characters
Authority comments	Text 4000 characters
EASA 2014 Internal	
Compliance internal	Value range ³ Compliant, partially compliant, non-compliant
Comments	Text 4000 characters

³Value ranges and value range data can be freely defined by system administrators. Value ranges serve to determine which options are available for selection in a drop-down combo box.

The dialogue on management of individual data fields or process attributes is instanced below:

Processattributes Settings > Master data > Process management > Processattributes

Process attributes

Search criteria

Process attributes

ID: 10 External ☐ Active ☒

Designation: Validation status

Compliance: EASA 2014 Regulation

Order: 043

Type: Value range

Value range: COMP EASA 2014 Status

Note: Current state of implementation.

Created on/by: 17.07.2014 12:07, FRANK
Changed on/by: 21.07.2014 09:13, FRANK

EASA201401 EASA 2014 Regulation

- 005 Category
- 010 Key elements
- 020 Applicable
- 021 Reason (if not applicable)
- 030 Evidence
- 031 Evidence assessment
- 032 Evidence comments
- 040 Validation organization
- 041 Validation employee
- 042 Validation schedule data
- 043 Validation status
- 050 Priority
- 060 Cost of compliance
- 070 Cost of non-compliance

EASA201402 EASA 2014 Findings

EASA201403 EASA 2014 Authority

5

Award user rights for requirements

It must be specified in the system which compliance category can be viewed (READ) and edited (WRITE) by which user.

This allocation will not be undertaken across the board for all requirements, but can be set individually for each requirement and user. In this way, for instance, persons can be explicitly delegated to collaboratively manage the data category *"EASA 2014 Findings"* for the requirement *"ADR.OPS.C.010 Pavements, other ground surfaces and drainage"*.

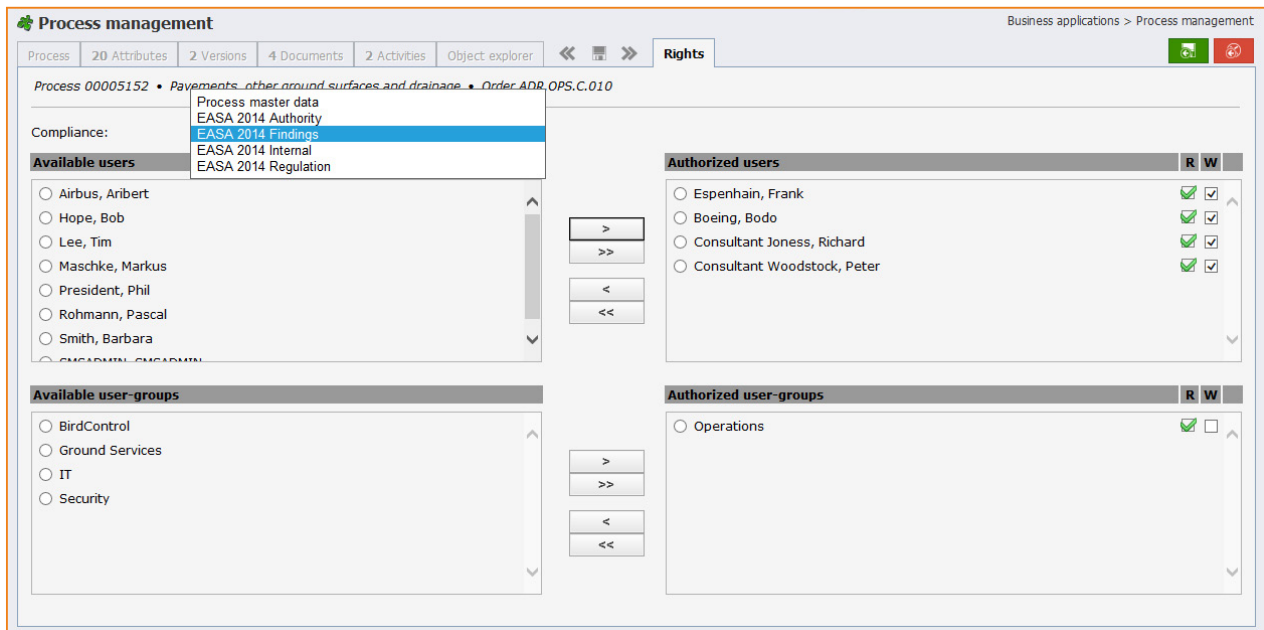
Furthermore, for the *"12 members of staff from 7 specialist departments"* who are commissioned with compliance implementation activities, can be set exactly which requirements, associated documents and tasks these employees can in each case view.

The assignment of user rights is the basis for a collaborative course of action and creates the technical pre-requisites for the delegation of tasks with the respective desired data protection aspects in mind.

The following table shows for the sample project which employees may read and process the compliance category *"EASA 2014 Findings"* for the requirement *"ADR.OPS.C.010 Pavements, other ground surfaces and drainage"* in the system:

Requirement	Category	Group of people	User or User Group	Right
AMC1 ADR.OPS.C.005				
ADR.OPS.C.010 SMS	EASA 2014 Regulations			
ADR.OPS.C.010 SMS	EASA 2014 Findings	SMS	Sorge, Konstantin	READ & WRITE
ADR.OPS.C.010 SMS	EASA 2014 Findings	SMS	Boeing, Bodo	READ & WRITE
ADR.OPS.C.010 SMS	EASA 2014 Findings	Consulting	Consultant Jones, Richard	READ & WRITE
ADR.OPS.C.010 SMS	EASA 2014 Findings	Consulting	Consultant Woodstock, Peter	READ & WRITE
ADR.OPS.C.010 SMS	EASA 2014 Findings	Implementation	Civil Engineering Group	READ & WRITE
	EASA 2014 Authority			
	EASA 2014 Internal			
AMC1 ADR.OPS.C.015				

The settings will be made in the following eControl dialogue:



6 Appoint responsible persons and departments

The assignment of responsible persons and departments makes possible targeted access to one part of the requirements – for example the organisational aspects or the specified division of work.

Standard data fields can be used for the appointment of responsible persons and departments. These are already available for every requirement, (sub-) system and process.

The possibility also exists of introducing proprietary compliance attributes, such as branch office, cost centre or operational areas and using them for selections and statistical analyses.

The screenshot displays the 'Process management' interface with the following details:

- Process Information:**
 - ID: 5152
 - Proc.-Nr.: ADR.OPS.C.010
 - Valid from/to: 01.01.1900 / 31.12.2999
 - External: ☐
 - Active: ☒
 - Process title: Pavements, other ground surfaces and drainage
 - Note: (empty text area)
 - Parent element: 030. SUBPART C - AERODROME MAINTENANCE
 - Type: Process
- Configuration Fields:**
 - Status: Unknown
 - Version: 2.0
 - Test interval: Yearly
 - Latest test at: 19.11.2013
 - Due: 19.11.2014
- Responsibility Assignment (highlighted with a pink box):**
 - Org.-Unit: Superstructure Work
 - Department: SW-AK2
 - Owner: Builder, Bob
 - Owner VM: (empty)
 - Responsible: Black, John
 - Respons. VM: (empty)
- Other Fields:**
 - Respons. info: (empty text area)
 - Description: (a) The aerodrome operator shall inspect the surfaces of all movement areas including pavements (runways, taxiways and aprons), adjacent areas and drainage to regularly assess their condition as part of an aerodrome preventive and corrective maintenance programme.
(b) The aerodrome operator shall:
(1) maintain the surfaces of all movement areas with the objective of avoiding and eliminating any loose object/debris that might cause damage to aircraft or impair the operation of aircraft systems;
(2) maintain the surface of runways, taxiways and aprons in order to prevent the formation of harmful irregularities;
(3) take corrective maintenance action when the friction characteristics for either the entire runway or a portion thereof, when uncontaminated, are below a minimum friction level. The frequency of these measurements shall be sufficient to determine the trend of the surface friction characteristics of the runway.
 - Standards: (empty text area)

7 Check requirements, document compliance status, derive tasks

Collecting data and analysing compliance-related circumstances for every requirement is a demanding task. The results of this activity will be filed tamper-proof in the data fields defined via compliance attributes. Any other detail information on hand can be configured in digital form *“as a file”* in the compliance archive.

Data collection starts in the example shown here with the requirement

“ADR.OPS.C.010 Pavements, other ground surfaces and drainage”

being checked by the consulting partner or its employees

“Richard Jones” and *“Peter Woodstock”* respectively (see Step 5).

The consulting partner will capture the findings and model implementation tasks in cooperation with *“Konstantin Sorge”* and *“Bodo Boeing”*, who are responsible for SMS. A rough description of the implementation tasks will be filed in the compliance attributes of the category *“EASA 2014 Findings”*.

The implementation tasks will subsequently also be entered in the compliance attributes, by the employees of the *“Civil Engineering”* user group.

The corresponding dialogue for management of the compliance attributes is visualised below.

The screenshot displays the 'Process management' application window. The top navigation bar includes tabs for 'Process', '20 Attributes', '2 Versions', '4 Documents', '2 Activities', 'Object explorer', and 'Rights'. The main content area shows the 'Process 00005152 • Pavements, other ground surfaces and drainage • Order ADR.OPS.C.010'. Below this, there are checkboxes for 'Show only used attributes' and 'Show detailed information'. The main table lists various compliance attributes for the 'EASA 2014 Regulation' category.

EASA 2014 Regulation	
Category	Requirement
Key elements	Routine check of the aircraft Operation surface Maintenance program runway surface FOD Routine check friction tester Maintenance program high-pressure water blaster
Applicable	Yes
Reason (if not applicable)	-
Evidence	Routine check programs Procedural instructions "Maintenance program runway surface" and "Maintenance program high-pressure water blaster"
Evidence assessment	Provision of documents: - Check sheet "Apron check" - Procedural instructions "Maintenance program runway surface" - Procedural instructions "Maintenance program high-pressure water blaster"
Evidence comments	Routine check program eControl "Apron check" data starting from 01.01.2009 Documents including version history attached
Validation organization	Arconda Airport
Validation employee	Boeing, Bodo
Validation schedule data	analysis coordination with authority corrective action examination by authority
Validation status	finished
Priority	not started
Cost of compliance	
Cost of non-compliance	

Archive compliance-related documents

The compliance attributes serve the storage of working results and assessments. As a rule, various documents emerge or are produced to verify the respective working result and to make it comprehensible for third parties.

eControl not only allocates the data fields to the compliance categories, but also the respective documents, in order to structure access and to be able to award targeted archive authorisations.

– Versioning

Documents can undergo multiple changes in the course of the compliance project. eControl saves documents with automatic versioning and so enables access to all saved versions.

In the example shown below, the document "Runway Safety Manual" passes through various processing stages from Version 1.0 up to the current Version 1.2, which are filed in the document archive in tamper-proof form:

The screenshot displays the 'Process management' interface. The top navigation bar includes tabs for 'Process', 'Attributes', 'Versions', 'Documents', 'Activities', 'Object explorer', and 'Rights'. The 'Documents' tab is active, showing a list of documents under the process '00005152 • Pavements, other ground surfaces and drainage • Order ADR.OPS.C.010'. The document list includes several versions of the 'Runway Safety Manual' (versions 1.0, 1.1, and 1.2) and other documents like 'EASA14Find - Ground surface inspection 20140515' and 'EASA14Reg - SOP Maintenance program high-pressure'. The document 'Runway Safety Manual 1.2' is highlighted with a red box. The right pane shows the details for this document, including its ID (367), release state (4), compliance reference (EASA 2014 Authority), title (Runway Safety Manual 1.2), category (Manuals), keywords (Runway Safety, IFALPA, Arcond Airport), and source file (Runway safety manual 1.2.pdf (00010061_004.pdf)). The document is marked as 'Checked in' and 'Active'. The bottom right corner has a 'Download' button.

– Checking in and out

Documents should be checked out and in again formally so as to advise the other editors and viewers of the revision status of the respective document.

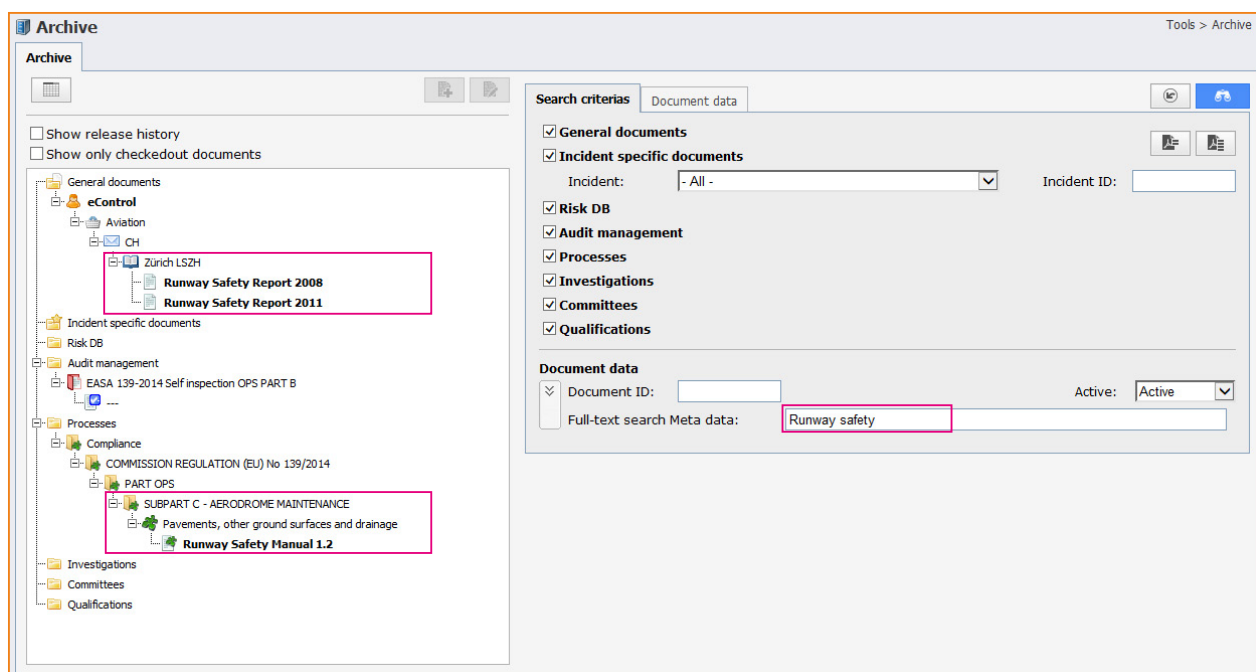
– User rights

Access to these documents must only be possible if the logged-in employee in each case has at least reading access to the compliance category of the requirement "ADR.OPS.C.010 Pavements, other ground surfaces and drainage" assigned to the document.

– Research functions

A central search function for the eControl document archive is available to every user. The eControl document archive makes it possible, whilst observing access rights, to research the documents for which the respective logged-in user has reading access.

In the example shown here, the user uses a full text search to search for the term “Runway safety”, whereby the system finds it in both the context of “*ADR.OPS.C.010 Pavements, other ground surfaces and drainage*” and the general publications of Zurich Airport, LSZH, from the years 2008 and 2011.



9 Plan and track measures

eControl task management serves the planning, assignment, tracking and documentation of all work assignments of the compliance system, whereby both those responsible and employees performing work are assigned.

These employees need not know the exact connection between the activities allotted to them and the respective requirement. A precise description of the task is of primary importance as a requirement for successful implementation.

The description of measures can as a matter of principle be read by both those responsible and the employees performing work – compliance authorisations (see step 5) are not required for this purpose.

Compliance authorisations are however required in order to document the task implementation and the task status in a tamper-proof manner.

An important feature of eControl task management is the notification management – e-mail recipients will be fully automatically informed of the assignment and conclusion of measures. For overdue measures can additionally be filed how often those responsible and if necessary other addressees should be advised via eMail of the delay.

The desired notifications can be individually specified for each task. In the example shown below, the safety manager Konstantin Sorge has delegated the statistical analysis of the *“Inspections of the air operations areas”* to the employee *“Tim Lee”*, who should have concluded the activities by 10.08.2014.

The screenshot displays the 'Process management' interface. The top navigation bar includes 'Process', '20 Attributes', '2 Versions', '4 Documents', and '2 Activities'. The main content area shows a task titled 'Send detailed statistics as .pdf documents' under the process 'Pavements, other ground surfaces and drainage'. The task is assigned to 'Lee, Tim' and has a target date of '10.08.2014'. The status is 'In processing'. The description includes 'Control steps / deficiency Distribution 2009,2010,2011,2012,2013,2014' and 'Deficiencies runway and apron surface status'. The 'Info' field contains the text: 'Please send control documents that have an initial event risk classification in the above context.'

Field	Value
ID	29
Compliance reference	EASA 2014 Authority
Title	Send detailed statistics as .pdf documents
Description	Control steps / deficiency Distribution 2009,2010,2011,2012,2013,2014 - Deficiencies runway and apron surface status - Condition joints and joint tape status - Rain: Areas with bad rain flow and risk of aquaplaning
Keyword 1	
Keyword 2	
Type	Preventive
Priority	High
Target date	10.08.2014
Actual date	
Status	In processing
Responsible	Lee, Tim
Realization	
Info	Please send control documents that have an initial event risk classification in the above context.
External organization	
External management	
Ext. info	

10 Monitor compliance status

The processing and supervision of the collaborative compliance management activities is a difficult task, for which good software support is desirable. eControl offers a uniform user interface for all users.

The system constantly ensures that the user only has access to the compliance attributes of the categories and requirements for which the user was previously authorised.

In the example shown below, all requirements are sought that fall under the responsibility of the employee *“Builder, Bob”*. Only requirements should be used that have already been processed and have the processing status (EASA2014Reg – Validation-Status) *“finished”*:

The screenshot displays the 'Process management' application window. On the left, a tree view shows a hierarchy of regulatory requirements under '000. EASA 139-2014'. The selected item is '020. PART OPS', which is expanded to show '020. SUBPART B - AERODROME OPERATIONAL SERVICES, E' and '020. SUBPART C - AERODROME MAINTENANCE'. A context menu is open over the selected item, showing 'New', 'Edit', and 'Show' options.

The main area of the window contains a detailed form for the selected requirement. The form includes fields for 'Title', 'ID', 'Valid from/to', 'Last check at from/to', 'Due at from/to', 'Organizational unit', 'Department', 'Responsible', 'Note', 'Process description', 'Owner', 'Default', 'Emergency notice', 'Status', 'Compliance right', and 'Process attribute'. The 'Owner' field is set to 'Builder, Bob'. The 'Status' field is set to 'finished'. The 'Compliance right' field is set to 'EASA14Reg - Validation status'. The 'Process attribute' field is set to 'finished'.

11 Generate compliance statistics

With the increasing division of work and the size and number of employees integrated in the project, the complete picture becomes considerably more difficult, in particular if there is a need to monitor according to areas of responsibility. eControl makes available instruments for monitoring the actual degree of compliance in real time.

The actual degree of compliance can be determined selectively taking into account all captured data.

eControl makes available a dynamic contingency table generator, which makes it possible to graphically process the distribution of compliance attributes against one another. In line with the eControl system standard, the data can also be saved in CSV format as an MS Excel-compatible table for further processing.

In the example shown below, the requirements are viewed that are assigned to the departments "SW-AK2". The system should contrast the validation phase (EASA2014Reg – Validation-Status) with the internally assessed compliance status (EASA2014Intern – Compliance Internal). Furthermore, for the filtered requirement the organisation should be listed that has performed or will perform the check (EASA2014Reg - Validation organisation).

The screenshot displays the eControl system interface with two main tabs: "Selection criteria" and "Report view". The "Selection criteria" tab is active, showing a tree structure on the left under "Enforce process structure" and a search mask on the right.

Enforce process structure: A tree view showing the hierarchy of process structures. The selected path is: 001. Process Structure > 000. EASA 139-2014 > 020. PART OPS > 020. SUBPART B - AERODROME OPERATIONAL SERVICES, E > ADR.OPS.B.060. Access to the movement area.

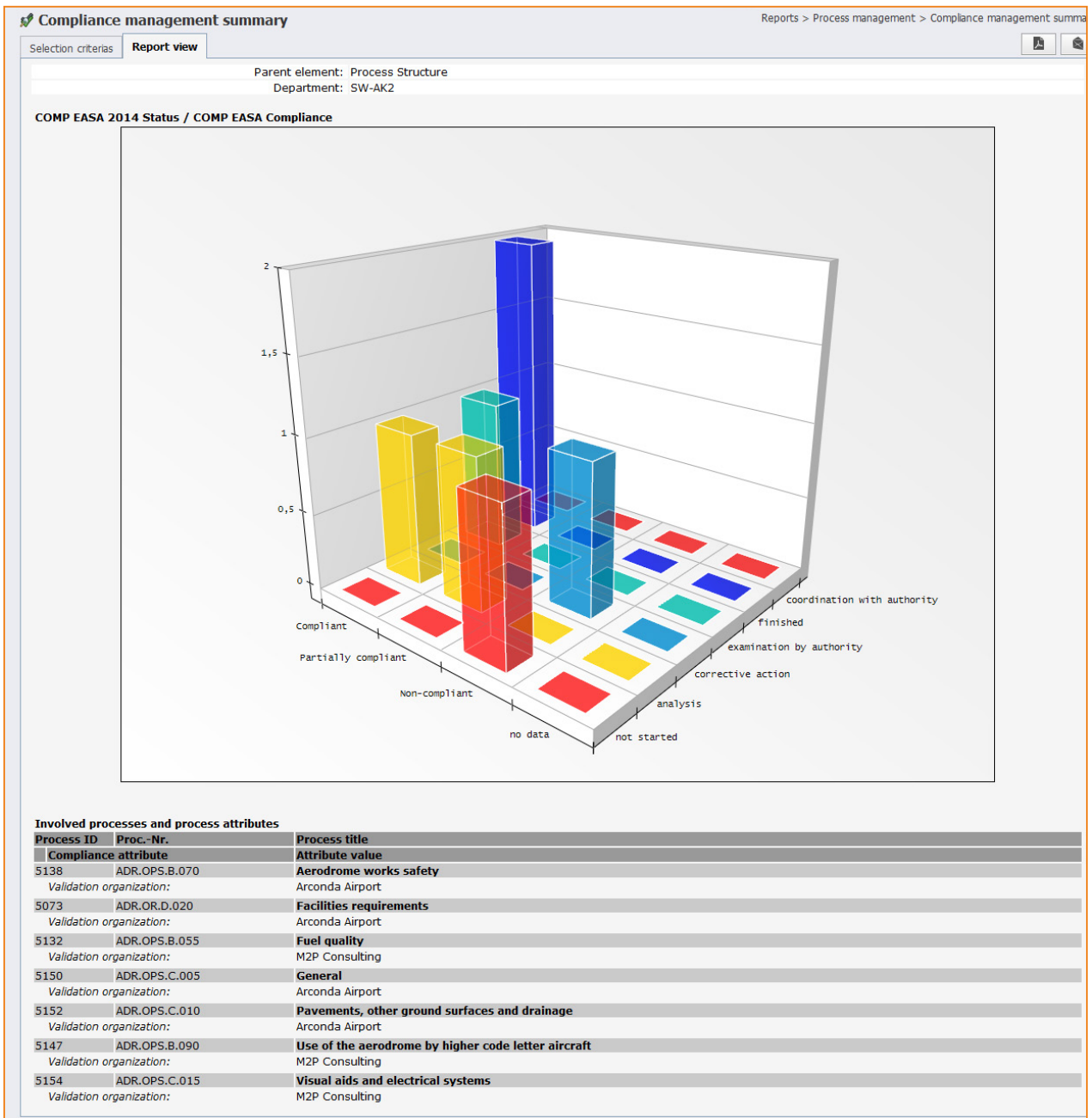
Search mask to narrow the process tree: A form with various filters. The "Department" filter is set to "SW-AK2". Other filters include Title, ID, Valid from/to, Due at from/to, Organizational unit, Responsible, Note, Owner, Status, Process attribute, and contains.

Report components: A table with three columns: Row attribute, Column attribute, and Representation. The first row is highlighted with a pink box and contains the following data:

Row attribute:	Column attribute:	Representation:
EASA14Reg - Validation status	EASA14Intern - Compliance internal	Chart
		Chart
		Chart
		Chart
		Chart

Report detailed information: A section with a checkbox and a dropdown menu. The dropdown menu is set to "EASA14Reg - Validation organization".

The following description results:



12 Communicate with the approval authorities

For every requirement, eControl makes compliance reports with variable depth of detail available.

To manage the scope of the report, the user can select and de-select individual compliance categories, and so for instance exclude data that was assigned to the compliance category *"EASA2014 Internal"*.

Furthermore, the metadata of the document in the compliance archives and a brief overview of the tasks initiated in connection with the actual requirement can be integrated, whereby here too, only the respective selected compliance categories are taken into account.

eControl also supports the user in the forwarding of this data via e-mail.

At the press of a button the system generates an e-mail, attaches the compliance report in PDF format and the other documents in the compliance archive – in each case in the most current version and restricts to the selected compliance categories:

The screenshot displays the 'Send' email window. At the top, there are tabs for 'E-mail', 'Contacts', and 'Category'. The 'E-mail' tab is active. The 'To:' field contains 'john.doe@authorities.gov' and the 'CC:' field contains 'f.espenhain@arconda.ag'. The 'Subject:' field is 'Compliance sheet: Pavements, other ground surfaces and drainage'. The 'Attachment:' section shows a list of files with radio buttons for selection: 'Statistic_20140721_113522.pdf', 'Runway safety manual 1.2.pdf', 'Findings GroundSurfaceInspection 20140515 + M2P comments.docx', 'Maintenance program runway surface.docx', and 'Maintenance program high-pressure water blaster.docx'. There are 'Durchsuchen...' and 'Upload' buttons next to the attachment list. Below the attachments are 'Download' and 'Remove' buttons. The 'Body:' section contains a text area with the following content: 'Dear Mr Doe: ad agreed on during our phone call, we are sending you our compliance information regarding the above stated requirement. In case you need any further information, we are gladly at your disposal at any time. Respectfully yours, Frank Espenhain, Safety Manager, Compliance Manager, Arconda Airport'. The text area has a rich text editor toolbar at the top with options for bold, italic, underline, font size, font family, and text color.

Compliance sheet

Print date: 21.07.2014
By: Frank Espenhain



No.:	ADR.OPS.C.010	ID:	5152
Title:	Pavements, other ground surfaces and drainage		
Process description:	(a) The aerodrome operator shall inspect the surfaces of all movement areas including pavements (runways, taxiways and aprons), adjacent areas and drainage to regularly assess their condition as part of an aerodrome preventive and corrective maintenance programme. (b) The aerodrome operator shall: (1) maintain the surfaces of all movement areas with the objective of avoiding and eliminating any loose object/debris that might cause damage to aircraft or impair the operation of aircraft systems; (2) maintain the surface of runways, taxiways and aprons in order to prevent the formation of harmful irregularities; (3) take corrective maintenance action when the friction characteristics for either the entire runway or a portion thereof, when uncontaminated, are below a minimum friction level. The frequency of these measurements shall be sufficient to determine the trend of the surface friction characteristics of the runway.		

Attributes


EASA 2014 Regulation

Category	Requirement
Key elements	Routine check of the aircraft Operation surface Maintenance program runway surface FOD Routine check friction tester Maintenance program high-pressure water blaster
Applicable	Yes
Reason (if not applicable)	-
Evidence	Routine check programs Procedural instructions "Maintenance program runway surface" and "Maintenance program high-pressure water blaster"
Evidence assessment	Provision of documents: - Check sheet "Apron check" - Procedural instructions "Maintenance program runway surface" - Procedural instructions "Maintenance program high-pressure water blaster"
Evidence comments	Routine check program eControl "Apron check" data starting from 01.01.2009 Documents including version history attached
Validation organization	Arconda Airport
Validation employee	Boeing, Bodo
Validation schedule data	Scheduled: 09.01.2014 Confirmed for 08.15.2014, holiday and illness resulted in capacity problems for AK4 as discussed on 06.24.2014
Validation status	finished
Priority	minor
Cost of compliance	
Cost of non-compliance	

EASA 2014 Findings

Finding description	The periodicity of the "routine check friction tester" is not explicitly mentioned, but merely noted in the check program of the contracted company.
Finding comments	Additions to the procedural instructions.

Findings target period	14Q3		
Findings organization	M2P Consulting		
Findings employee			
EASA 2014 Authority			
Authority notification date	01.06.2014		
Authority processing by			
Authority comments	Periodicity Runway Friction Measurement & Reporting Procedures / FAA Recommendation TABLE 3-1 MINIMUM FRICTION SURVEY FREQUENCY		
Authority changes			
Authority compliance	Compliant		
EASA 2014 Internal			
Compliance internal	Compliant		
Comments			
Documents			
ID	Title	Rel.	Changed on/by
	Source file		
EASA 2014 Regulation			
365	SOP Maintenance program high-pressure water blaster <i>Maintenance program high-pressure water blaster.docx (00010059_001.docx)</i>	1	17.07.2014 15:26:55 / FRANK
366	SOP Maintenance program runway surface V2 <i>Maintenance program runway surface.docx (00010060_001.docx)</i>	3	21.07.2014 10:16:47 / FRANK
EASA 2014 Findings			
364	Ground surface inspection 20140515 <i>Findings GroundSurfaceInspection 20140515 + M2P comments.docx (00010058_002.docx)</i>	2	21.07.2014 10:10:19 / FRANK
EASA 2014 Authority			
367	Runway Safety Manual 1.2 <i>Runway safety manual 1.2.pdf (00010061_004.pdf)</i>	4	21.07.2014 10:10:20 / FRANK
Activities			
EASA 2014 Authority			
30	Make SOPs and manual available <i>Description:</i> Involved SOPs and the safety Manual have to be made available to the authorities <i>Responsible:</i> Frank Espenhain <i>Realization:</i> Bodo Boeing	Status: <i>Type:</i> <i>Priority:</i>	Finished Preventive High
29	Send detailed statistics as .pdf documents <i>Description:</i> Control steps / deficiency Distribution 2009,2010,2011,2012,2013,2014 - Deficiencies runway and apron surface status - Condition joints and joint tape status - Rain: Areas with bad rain flow and risk of aquaplaning <i>Responsible:</i> Tim Lee <i>Realization:</i>	Status: <i>Type:</i> <i>Priority:</i>	In processing Preventive High



Print date: 21.07.2014

By: Frank Espenhain

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13 Certify as tamper-proof

All data in the system is saved in a tamper-proof manner. For every data field can be traced which user saved or changed data and at what point in time, whereby in each case the field values before and after the change are recorded.

The user's signature is delivered to the database implicitly by means of a personal, direct login.

For a reliable interpretation of the data, the manufacturer has made an explanatory data dictionary available.

Access to change data is provided by a report generator, which requires a special authorisation.

In the following example it needs to be determined who has changed the compliance attribute *"Validation schedule date"* (Key 613) for the requirement *"ADR.OPS.C.010 Pavements, other ground surfaces and drainage"* and when:

Audit trail

Reports > Miscellaneous > Audit trail

Selection criteria

Report view

ID:

Value:

Old Value:

PK1:

PK2: 5152

PK3:

PK4:

PK5:

Table: SMS_PROCESSATTRIB

User:

Field:

Period: 21.07.2014 /

ID	Table	Field	User	Time of change
	PK1	PK2	PK3	PK4
	Value	Old Value	PK5	
463348	SMS_PROCESSATTRIB	PROCESSATTRIB_UD	FRANK	21.07.2014 11:44
	10	5152	9	
	21.07.2014 11:44:18	17.07.2014 15:03:32		
463349	SMS_PROCESSATTRIB	PROCESSATTRIB_VALUE	FRANK	21.07.2014 11:44
	10	5152	9	
	Scheduled: 09.01.2014 Confirmed for 08.21.2014, further pushed back due to on-going illness		Scheduled: 09.01.2014 Confirmed for 08.15.2014, holiday and illness resulted in capacity problems for AK4 as discussed on 06.24.2014	

14 Certify training sessions and maintain qualifications incl. Read&Sign

For the sample project, the legislator has defined specific requirements for the qualifications of employees involved:

According to “AMC1-ADR.OR.D.005(11)(d) – Training”, all employees who work within the area of application of the EASA regulation must receive a corresponding briefing on the legal provisions and be sensitised to the topic “Compliance”. Furthermore it is necessary that all employees who are actively involved in compliance management are trained adequately in order to carry out their tasks in accordance with the rules.

This procedure is to be recommended for every compliance Standard, whereby it appears generally not to be possible to anchor acceptance for compliance Standards without sufficient knowledge.

The eControl TQMS Training and Qualifications Management System comprises the administration of in-house employees and the staff of third party companies (in this context: the stakeholder's staff), dialogues for the administration of qualifications and qualification events, a mail centre for automating communications and a reporting system for certifying the training measures.

The TQMS module also possesses Read & Sign functionality. Read & Sign is used to identify which user was trained to what level of information. Should this level of information change, those responsible can either extend a specific invitation for additional training or using Read & Sign request confirmation from the trained employees themselves that they have taken note of the respective change, in a tamper-proof manner.

The screenshot displays the 'Qualification events' interface. At the top, there's a navigation bar with tabs: Event, Requirements, Processes, Certificates, New message, Communications, Documents, Stack, and 7 Member. The main content area is divided into sections. The 'Master data' section shows 'Qualification master data (view)' with fields for Matchcode (COMP 139-2014 Basic) and Title (Overview EASA Compliance as per 139-2014 (ID: 1)). Below this is the 'Qualification event' section with fields for ID (1), Title (EASA Overview), Internal, Certificate valid from/to (25/07/2014 / 25/07/2016), and Realized by (Own execution). A 'Capacity planning' section includes Min., Target, Max., Inv., Conf., Attend., Qualify, Not qualify, Ca NS, and Cndl. fields. At the bottom, the 'Event locations and dates (25/07/2014 - 25/07/2014)' section shows Title (Theoretical instruction), Place (Room 2001, Building 203), Start (25/07/2014 00:00), End (25/07/2014 00:00), Status (Planned), and Coach (Esenhain, Frank).



Further information on our TQMS module can be found in our product catalogue: “TQMS - Training and Qualification Management System”

15 Perform compliance audits

Compliance audits serve to critically review all relevant processes and systems in respect of compliance with the legal provisions.

Thus compliance audits are an important element of compliance managements. They are carried out in accordance with a defined audit plan, which should be produced and managed by those responsible for compliance. They must contain periodic reviews of all relevant airport departments including the compliance monitoring sector itself.

Furthermore, times can be built into the audit plan for unscheduled audits or follow-up audits in order to ensure that correctional measures are taken in accordance with the legal requirements.

For the example chosen, the EASA requires that all departments be audited within the first 12 months after the aerodrome certificate has been issued; the subsequent audit cycle should according to AMC1-ADR.OR.D.005(11)(e) – *“Audit Scheduling”* be measured against the importance of the individual departments on the subject of *“Safety”* and may in each case last a maximum of 36 months.

The eControl audit management software model simplifies and speeds up the management of internal, external and supplier audits and equally of compliance system audits.

Pre-defined audit catalogues are already available for a large number of standards, so a lot of effort for structuring in accordance with the standard can be avoided. The audit catalogues can be individually adapted and in addition can be modified while the audit is being carried out. Various differentiated procedures are available for the assessment of divergences.

The planning, carrying out and efficacy screening of corrective and prevention tasks are integrated in eControl task management.

The audit archive is part of the document archive and offers authorised users a complete picture, including the compliance archive.

Audits Business applications > Audit management > Audits

Audit: Rights Attributes Audit elements **Audit results** Documents Activities Obj.Exp.

Audit 00000008 • EASA 139-2014 Self Inspection OPS PART C

Audit results Documents Activities

ID: 1450

Type: Checkpoint Req./Rec.?: Recommendation Factor:

Title: ADR.OPS.C.010 Pavements, other ground surfaces and drainage (a) The aerodrome operator shall inspect the surfaces of all movement areas including pavements (runways, taxiways and aprons), adjacent areas and drainage to regularly assess their condition as part of an aerodrome preventive and corrective maintenance programme.
(b) The aerodrome operator shall:
(1) maintain the surfaces of all movement areas with the objective of avoiding and eliminating any loose object/debris that might cause damage to aircraft or impair the operation of aircraft systems;
(2) maintain the surface of runways, taxiways and aprons in order to prevent the formation of harmful irregularities;
(3) take corrective maintenance action when the friction characteristics for either the entire runway or a portion thereof, when uncontaminated, are below a minimum friction level. The frequency of these measurements shall be sufficient to determine the trend of the surface friction characteristics of the runway.

Explanation:

Int. info:

Ref. rules: Ref.-ID:

Info:

Info:

Category A:

Category B:

Category C:

Category D:

Applicable ☒ Checked ☒ Accept ☐ Date: 18.07.2014

Compliance: low

Info: Explicit exceptions to the check Intervals into the runway safety manual not made yet.

Deviation degree: low

Info: Periodicity for friction tester in SOP not set

Deviation frequency: not occurred

Info: Tests so far better than minimum friction survey frequency as per FAA 150/5320-12 page 19

Deviation consequence: no effect

Info: none

Ext. rating:

Ext. explanation Text:

Ext. info:



Further information on audit and compliance management using eControl can be found in our product catalogue:
"SMS - Safety Management System"

eControl

Process management | Operation management | Safety management | Audit management | Qualification management | Compliance management | Environmental Bird Control management

